

## Patent Claims

1. Regulating device for a hydraulic system by which a valve (3) controlling a consumer can be controlled or regulated, wherein a bus (1) and bus interfaces (4) are arranged between a job computer (2) and the valve (3), wherein at least one sensor (5), whose signal is to be taken into account in controlling or regulating the consumer, is associated with the consumer, characterized in that an autonomous controlling and regulating element (10) is arranged between the bus (1) and the valve (3), this autonomous controlling and regulating element (10) being outfitted with a bus interface (4), a microcontroller (11) connected to the latter, and at least one analog-to-digital converter (12) to which the at least one sensor (5), which is an analog sensor (5), can be connected.

2. Regulating device according to claim 1, characterized in that the controlling and regulating element (10) is structurally combined with the valve (3).

3. Regulating device according to claim 2, characterized in that every valve (3) is outfitted with a plug-in unit (20) by which the controlling and regulating element (10) can be connected to the bus (1) and to sensors (5) and a power supply.

4. Regulating device according to claim 3, characterized in that the plug-in unit (20) comprises two identical plug-in connection configurations(21), each of which contains a connection to the bus (1), to the power supply, and to at least one sensor (5).

5. Regulating device according to claim 4, characterized in that every plug-in connection configuration (21) is outfitted with six contacts (22), two of which serve for the connection of analog sensors (5).

6. Regulating device according to claim 5, characterized in that a two-conductor sensor can be connected to the two contacts (22) for the connection of the analog sensors (5).

7. Regulating device according to claim 5, characterized in that two sensors (5) which are connected to ground GND on one side can be connected to the two contacts (22) for the connection of analog sensors (5).

8. Regulating device according to claim 4, characterized in that an analog transmitter (24) can be connected to two contacts (22) of one of the plug-in connection configurations (21) of the plug-in unit (20).